

Claims:

1. A pharmaceutical formulation in the form of an ordered mixture for respiratory administration comprising a drug and maltitol excipient.
2. A formulation according to claim 1 where the excipient has not spherical shape.
3. A formulation according to any preceding claim, wherein the coarse particles may have a diameter of over 20 μm .
4. A formulation according to any preceding claim, wherein the coarse particles have a diameter of 60-800 μm .
5. A formulation according to any preceding claim, wherein the drug is selected from β 2-adrenoreceptor agonists for example salbutamol, terbutaline, rimeterol, fenoterol, reproterol, adrenaline, pirbuterol, isoprenaline, orciprenaline, bitolterol, salmeterol, formoterol, clenbuterol, procaterol, broxaterol, picumeterol, TA-2005 and malbuterol and salts and hydrates of such salts; anticholinergic bronchodilators for example ipratropium bromide, oxitropium and its salts and tiotropium and its salts; glucocorticosteroids for example beclomethasone, fluticasone, budesonide, tipredane, dexamethasone, betamethasone, fluocinolone, triamcinolone acetonide, flunisolide, mometasone and 16, 17-acetals of pregnane derivatives, for example rofleponide palmitate and ciclesonide and derivatives of these steroids; anti-allergic medicaments for example sodium cromoglycate and nedocromil sodium; leukotriene antagonists for example, zafirlukast, montelukast, pranlukast, zileuton antihistamines for example terfenadine, cetirizine, loratadine and azelastine; antibiotics, -; pain control substances, for example morphine, codeine, pethidine.
6. A formulation according to any preceding claim, wherein the drug is selected from formoterol, terbutaline or budesonide and salts and hydrates thereof and hydrates of salts and a formoterol/budesonide combination e.g Symbicort®.
7. A formulation according to any preceding claim, wherein a drug combination is selected from formoterol/budesonide; formoterol/fluticasone; formoterol/mometasone; salmeterol/fluticasone; formoterol/tiotropium salts; zafirlukast/formoterol, zafirlukast/budesonide; montelukast/formoterol; montelukast/budesonide; loratadine/montelukast and loratadine/zafirlukast and derivatives and salts and hydrates of such derivatives and salts.

8. A method of selecting a crystalline excipient having its origin from the vegetable kingdom or being totally synthesized for use as a carrier/diluent in the preparation of pharmaceutical formulations for respiratory administration of micronised drugs by means of an inhaler comprising

- i) selecting an excipient that is a non-ionic compound, giving an iso-osmotic solution to saline when dissolved in water at a concentration of at least 5.5 % (w/v) and
- ii) being at the most only slightly non-hygroscopic and non-reducing.

9. A pharmaceutical formulation for respiratory administration comprising a drug and maltitol excipient.